

THAT WHICH IS CLAIMED:

1. An infrared image generation device comprising:
  - a laser light source;
  - 5 at least one scanner that receives laser light from said laser light source and is capable of redirecting the laser light;
  - a processor that controls operation of said at least one scanner to generate at least one infrared image; and
  - 10 a target plate that receives the redirected laser light from said at least one scanner and on which at least one infrared image is generated.
2. The infrared image generation device of claim 1, wherein said laser light source is a diode pumped solid-state laser light source.
- 15 3. The infrared image generation device of claim 1, wherein said processor controls output power of said laser light source.
4. The infrared image generation device of claim 1, wherein said at least one scanner comprises an amplifier.
- 20 5. The infrared image generation device of claim 1, wherein said target plate comprises:
  - a transparent heat sink layer facing said at least one scanner;
  - an insulator layer adjacent the transparent heat sink layer; and
  - 25 an emissive layer that is at least opaque adjacent the insulator layer.
6. The infrared image generation device of claim 5, wherein the transparent heat sink layer is made of diamond.
- 30 7. The infrared image generation device of claim 5, wherein the insulator layer is made of heat-resistant glass.
8. The infrared image generation device of claim 5, wherein the emissive layer comprises carbon.

9. The infrared image generation device of claim 1, further comprising a collimator disposed opposite said at least one scanner relative to said target plate.

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10. The infrared image generation device of claim 1, wherein said target plate on which at least one infrared image is generated displays an image having at least one portion that is a temperature of at least 1000 Kelvin.

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11. A method for generating an infrared image, comprising:  
providing laser light;  
scanning laser light across a target plate; and  
generating at least one infrared image on the target plate in response to the laser light scanned thereacross.

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12. The method for generating an infrared image of claim 11, wherein generating at least one infrared image comprises generating at least one infrared image having at least one portion that is a temperature of at least 1000 Kelvin.

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13. The method for generating an infrared image of claim 11, further comprising collimating the at least one generated image for viewing by a sensor.

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14. The method for generating an infrared image of claim 11, further comprising drawing heat out of the target plate after scanning the laser light across the target plate to prevent the laser light from heating portions of the target plate other than the portion on which the laser light is incident.

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15. The method for generating an infrared image of claim 11, wherein providing the laser light comprises controlling a laser light source to transmit the laser light at at least one power level.

16. The method for generating an infrared image of claim 11, wherein generating the at least one image comprises receiving the laser light having a first power level to generate at least one portion of the image having a first temperature and receiving the laser light having a second power level to generate at least one portion of the image having a second temperature, wherein the second power level and second temperature are less than the first power level and first temperature, respectively.

17. The method for generating an infrared image of claim 11, wherein generating the at least one image comprises receiving the laser light for a first period of time to generate at least one portion of the image having a first temperature and receiving the laser light for a second period of time to generate at least one portion of the image having a second temperature, wherein the second period of time and second temperature are less than the first period of time and first temperature, respectively.

18. A system for testing an infrared sensor, comprising:  
a source element capable of providing laser light;  
at least one scanning element capable of receiving the laser light from said source element and capable of redirecting the laser light;  
a processing element capable of controlling operation of said at least one scanning element to generate at least one infrared image;  
a target element capable of receiving the redirected laser light from said at least one scanning element on a first side of said target element and capable of displaying at least one infrared image on a second side of said target element that is opposite the first side; and  
an infrared sensor element facing the second side of said target element, wherein said processing element is also capable of determining whether said sensor element detects the at least one infrared image.

19. The system for testing an infrared sensor of claim 18, wherein said processing element is capable of controlling output power of said source element.

20. The system for testing an infrared sensor of claim 18, further comprising a relay optical element capable of focusing the at least one infrared image at a focal point of said infrared sensor element.

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21. The system for testing an infrared sensor of claim 18, wherein said target element is capable of displaying an image having at least one portion that is a temperature of at least 1000 Kelvin.

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22. The system for testing an infrared sensor of claim 18, wherein said target element comprises a heat sink element capable of drawing heat out of said target element to prevent the laser light from heating portions of said target element other than the portion on which the laser light is incident.